

REMARKS

Claim 20 has been amended to improve clarity. The amendment is not intended, nor should it be construed as related to patentability or surrender of any subject matter.

Claims 20 and 23-64 stand rejected under 35 USC §112, first paragraph, as not being enabled by the present specification. Applicants gratefully acknowledge agreement that making of the pharmaceutical product of claim 20 is enabled by the specification. Office Action at 2. However, Applicants respectfully disagree that use of that product is not enabled by the case.

As an initial matter, it is noted that the Deonarain (V) and Verma (W) references, as cited by the USPTO, have publication dates falling well after the priority date of the instant application. Reconsideration and withdrawal of those references as prior art documents are requested.

Turning to the Office Action, Deonarain, Verma, Miller and Crystal are cited to support the position that the instant specification:

fails to teach any specific targeting techniques, fails to provide any working examples which encompass vector targeting, and fails to direct the skilled artisan to any teachings of targeting strategies known in the art which would allow one of skill in the art to use the claimed pharmaceutical product without undue experimentation.

Office Action at 2.

As relied on, the Deonarain, Verma, Miller and Crystal references are **not germane** to the claimed invention for the following reasons.

Page 6 of the specification (lines 14-16), for instance, discloses that the claimed pharmaceutical products can be used in the methods described in the instant case. Certain of those methods have been claimed in the parent ie., U.S. Pat. No. 5,980,887, (hereinafter "887" patent). Examples of methods claimed in the '887 patent include methods for inducing formation of new blood vessels by administering endothelial progenitor (EP) cells and nucleic acid encoding an endothelial cell mitogen. See claims 1 and 2 of '887 patent. Related treatment

methods are also claimed in the patent. See claims 6 and 7, for example. As formulated, the rejection does not provide any concrete reasons why one of skill could not use the claimed pharmaceutical products in the claimed methods of the '887 patent. On these grounds alone, reconsideration and withdrawal of the rejection are respectfully requested.

Applicants respectfully disagree with the rejection on additional grounds.

As cited, the Deonarain, Verma, Miller and Crystal references do not disclose methods for inducing new blood vessel growth. They are simply not relevant to the claimed invention as relied on. However as of Applicants' priority date, there was recognition that such methods could be used to help induce blood vessel growth. See eg., U.S Pat. No. 5,980,887; and Isner, J.M et al. (ref. CH) and Tsurumi, Y. et al. (CE) (citing eg., clinical and laboratory evidence of new blood vessel growth following gene therapy). Thus one of skill having read the instant specification would readily understand that the claimed pharmaceutical product could be used in these and related therapy methods.


Particular methods for using the claimed pharmaceutical composition are disclosed throughout the instant case. See eg., pg. 6, lines 14-16; pg. 27 lines 18-23. Such use includes acceleration of graft tissue healing such as vascular grafts. See pg. 27, lines 14-16. Other uses are taught throughout the application including the Drawings.

In view thereof, it is respectfully submitted that the instant cases fully discloses how to used the claimed invention. Reconsideration and withdrawal of the instant rejection are requested.

Attached to this submission is a marked-up version of the changes made to the specification and claims. The attached page is captioned "version with markings to show changes made".

Although a further fee is not deemed necessary to consider this submission, the USPTO is hereby authorized to charge our deposit account 04-1105 should such fee be considered necessary.

Respectfully submitted,



Robert L. Buchanan
Registration No. 40,927
EDWARDS & ANGELL, LLP
DIKE, BRONSTEIN, ROBERTS &
CUSHMAN
Intellectual Property Practice Group
P. O. Box 9169.
Boston, MA 02209
Tel. (617) 439-4444
Fax: (617) 439-4170 / 7748

Date: September 4, 2001

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claim 20 has been amended as follows:

20. (Amended) A pharmaceutical product comprising a nucleic acid encoding an endothelial cell mitogen and ~~an~~ EC progenitors, in a physiologically acceptable administrable form.

#176908